



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,931	05/10/2002	Luc Varin	14187.00001	8743

27160 7590 05/28/2004

PATENT ADMINSTRATOR  
KATTEN MUCHIN ZAVIS ROSENMAN  
525 WEST MONROE STREET  
SUITE 1600  
CHICAGO, IL 60661-3693

EXAMINER

BAUM, STUART F

ART UNIT

PAPER NUMBER

1638

DATE MAILED: 05/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/019,931

Applicant(s)

VARIN ET AL.

Examiner

Stuart F. Baum

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-51 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-3, 10-11, drawn to a method for increasing the time to flowering comprising increasing endogenous levels of jasmonic acid and derivatives thereof by applying to a plant jasmonic acid or derivatives thereof.

Group II, claim(s) 1-3, 10-11, drawn to a method for increasing the time to flowering comprising increasing endogenous levels of jasmonic acid and derivatives thereof by applying an inhibitor of a sulfotransferase sulfonating 12-hydroxyjasmonic acid and/or 11-hydroxyjasmonic acid.

Group III, claim(s) 1-3, 10-11, drawn to a method for increasing the time to flowering comprising increasing endogenous levels of jasmonic acid and derivatives thereof by applying a stimulator of an hydroxylase hydroxylating jasmonic acid and/or methyljasmonic acid.

Group IV, claim(s) 1-2, 4-9, 11-18, 43-44, 47, drawn to a method for increasing the time to flowering comprising increasing endogenous levels of jasmonic acid and derivatives thereof comprising inhibiting expression of AtST2a or a functional homologue thereof.

Group V, claim(s) 1-2, 4-9, 11-18, 43-44, 47, drawn to a method for increasing the time to flowering comprising increasing endogenous levels of jasmonic acid and derivatives thereof comprising inhibiting expression of AtST2b or a functional homologue thereof.

**If Applicant elects Group IV or Group V, Applicant is also to elect either SEQ ID NO:1 of SEQ ID NO:2 for the election to be complete.**

Group VI, claim(s) 19-20, drawn to a composition for inducing flowering in a plant.

Art Unit: 1638

Group VII, claim(s) 21-22, 28, drawn to a method for delaying flowering in a plant by lowering the level of a jasmonic acid conjugate or derivative thereof comprising applying an inhibitor and/or an inactivator of a jasmonic acid conjugate or derivative thereof.

Group VIII, claim(s) 21-22, 28, drawn to a method for delaying flowering in a plant by lowering the level of a jasmonic acid conjugate or derivative thereof comprising applying a stimulator of sulfotransferase sulfonating 12-hydroxyjasmonic acid.

Group IX, claim(s) 21-22, 28, drawn to a method for delaying flowering in a plant by lowering the level of a jasmonic acid conjugate or derivative thereof comprising applying an inhibitor of hydroxylase.

Group X, claim(s) 21, 23-27, 29-33. and 45-46, drawn to a method for delaying flowering in a plant by lowering the level of a jasmonic acid conjugate or derivative thereof comprising increasing expression of AtST2a.

Group XI, claim(s) 21, 23-27, 29-33. and 45-46, drawn to a method for delaying flowering in a plant by lowering the level of a jasmonic acid conjugate or derivative thereof comprising comprising increasing expression of AtST2b.

**If Applicant elects Group X or Group XI, Applicant is also to elect either SEQ ID NO:1 of SEQ ID NO:2 for the election to be complete.**

Group XII, claim(s) 34-35, drawn to a composition for delaying flowering.

Group XIII, claim(s) 36-42, drawn to an isolated nucleic acid molecule encoding a plant 11-hydroxyjasmonic acid or 12-hydroxyjasmonic acid sulfotransferase, vector and transgenic plant comprising said molecule.

Group XIV, claim(s) 48-49, drawn to an isolated polypeptide.

Group XV, claim(s) 50-51, drawn to an antibody.

2. The claims are not linked by a single special technical feature because the invention of Group I does not constitute an advance over the prior art. Group I is taught by Krajncic et al (1995 Journal of Plant Physiology, 146(5-6):754-756) who teach modulating flowering in *Spirodela polyrrhiza* when plant are grown on a medium containing different concentrations of jasmonic acid. Hence, there is no special technical feature that links or is shared by any of the

Art Unit: 1638

groups; i.e., a method for increasing the time to flowering comprising increasing the endogenous levels of jasmonic acid derivatives of Group I, a method for increasing the time to flowering comprising increasing the endogenous levels of jasmonic acid derivatives by applying an inhibitor of a sulfotransferase of Group II, a method for increasing the time to flowering comprising increasing the endogenous levels of jasmonic acid derivatives by applying a stimulator of an hydroxylase of Group III, a method for increasing the time to flowering comprising increasing the endogenous levels of jasmonic acid derivatives comprising inhibiting expression of AtST2a of Group IV, a method for increasing the time to flowering comprising increasing the endogenous levels of jasmonic acid derivatives comprising inhibiting expression of AtST2b of Group V, a composition for inducing flowering of Group VI, a method for delaying the time to flowering comprising applying an inhibitor and/or an inactivator of jasmonic acid conjugate or derivative thereof of Group VII, a method for delaying the time to flowering comprising applying a stimulator of sulfotransferase of Group VIII, a method for delaying the time to flowering comprising applying an inhibitor of hydroxylase of Group IX, a method for delaying the time to flowering comprising increasing expression of AtST2a of Group X, a method for delaying the time to flowering comprising increasing expression of AtST2b of Group XI, a composition for delaying flowering of Group XII, the nucleic acid of Group XIII, the isolated polypeptide of Group XIV, or the antibody of Group XV.

3. Because these inventions are distinct for the reasons given above, and the literature and sequence searches required for each of the Groups are not required for another of the Groups, restriction for examination purposes as indicated is proper.

Art Unit: 1638

4. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).
5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stuart F. Baum whose telephone number is 571-272-0792. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on 571-272-0804. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.

A handwritten signature in black ink, appearing to read 'Stuart F. Baum', with a long horizontal flourish extending to the right.

Stuart F. Baum Ph.D.  
Patent Examiner  
Art Unit 1638  
May 14, 2004